ASSESSMENT OF USE OF BIZACT BARBED PHARYNGOPLASTY IN MANAGEMENT OF SNORING AND OBSTRUCTIVE SLEEP APNEA: PROSPECTIVE STUDY

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Introduction

Obstructive sleep (OSA) apnea is a hazardous medical problem that cause physical as well as behavioral perturbation. It's crucial to do a thorough work up and assessment of all cases looking after care for snoring or OSA. Polysomnography (PSG) has been considered the gold standard for assessing and evaluating the degree of OSA in all cases. The obstruction that happens in OSA is explained by collapse of the pharyngeal airway during sleep. The cause and mechanism of collapse is because of interaction of the easily collapsing upper airway with the relaxing pharyngeal dilator muscles that occurs during sleep. Obesity is one of the essential risk factors. Upper airway collapse in cases suffering OSA syndrome usually has a multi-levels etiology that might include the retro-palatal, retro-lingual and/or laryngeal areas; the collapse of uvulo-palatal complex as well as the lateral pharyngeal wall might be determined by DISE before surgery. Various surgical approaches are employed to widen areas of obstruction including nasal operations, palatal and pharyngeal operations , tongue base and epiglottis operations. One of the novel approaches is the usage of barbed sutures and bizact equipment in palatal & pharyngeal widening.

Aim of the work

The primary objective of the work was to assess the usage of BiZact Barbed pharyngoplasty in the management of cases with snoring and OSA.

Patients

This study was conducted on 20 patients with snoring and or OSA presented to the outpatient clinic of Otorhinolaryngology department of Alexandria University Hospital.

Inclusion criteria: Adults >18 years. Fit for general anesthesia (GA). Patients diagnosed as having OSA (apnea hypopnea index (AHI) > 5) and the site of obstruction is retropalatal.

Exclusion criteria: Patients with previous palatal surgery e.g. UPPP or significant craniofacial anomalies. The site of obstruction is at the tongue base**.** Patients did tonsillectomy. All patients signed a written informed consent before being enrolled in the present study. The study conducted in the department of Otorhinolaryngology, Alexandria University.

Methods

The assessment and workup for surgical interventions have to include a full history, laboratory and cardiology investigation, full head & neck assessment, a flexible fiberoptic nasopharyngolaryngoscopy with Műllermanauver, and proper imaging [such as cephalometrics or dynamic sleep MRI], PSG , DISE. This workup provides pathological entities of the upper airway (such as tumour, cysts) to be excluded and sites of disproportionate anatomically (such as big soft palate, uvula, base of tongue, and a hypoplasia of the mandible) to be reported.
All patients did Bizact barbed pharyngoplasty.

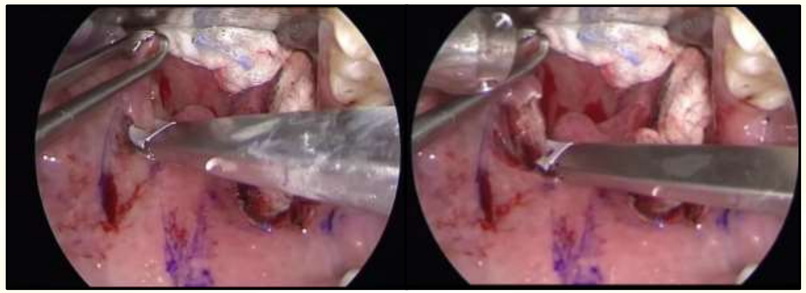

Fig. 1: Delicate tonsillectomy using Bizact

Results

Table 1: Distribution of the studied cases according to to Pre & Post AHI in different groups of OSA

	AHI pre		
	Mild (n = 8)	Moderate (n = 2)	Severe (n = 10)
Pre			
Min. – Max.	5.10 – 14.0	19.0 – 28.0	33.50 – 71.20
Mean ± SD.	9.89 ± 3.84	23.50 ± 6.36	47.49 ± 11.60
Median	10.50	23.50	45.25
Post			
Min. – Max.	4.0 – 11.0	6.0 – 9.0	7.0 – 19.0
Mean ± SD.	5.75 ± 2.19	7.50 ± 2.12	15.0 ± 3.71
Median	5.0	7.50	16.0

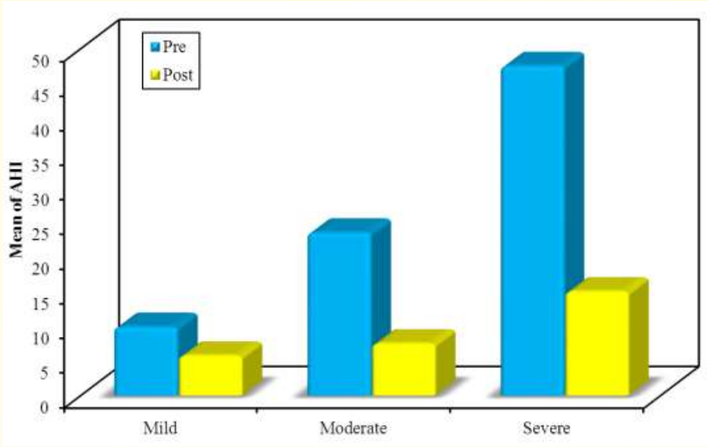

Fig. 2: Comparison between the 2 studied periods according to AHI in different groups according to severity of OSA.

Conclusion

Now, there's a common agreement in OSA surgery, we don't have to search for "treatment of choice", instead, "choice of treatment" is the principal issue, we have to tailor the management options for each single patient. Careful choice of candidates is necessary to obtain satisfactory outcomes. When properly selected, BiZact BRP operation proved to be a feasible and efficient method to retro palatal obstruction in OSA cases. Sound knowledge of BiZact BRP anatomy to avoid the higher risk of injuries to neural & vascular elements. BiZact Barbed pharyngioplasty is relatively rapid and safe, easily learned and highly efficient as regards postoperative outcomes, with very reduced morbidity and complication rates.